

Application of Neural Networks to Industrial Diagnosis of an Agro-Alimentary production System

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Abstract

Our objective through the diagnosis systems design is to help the operators of the dairy in their tasks of detection and diagnosis of the failures occurring on the level of the system of pasteurization of milk and to contribute to their resolution.

The objective of this paper, is to conceive and carry out a system of assistance to the diagnosis of the failures by RBF networks applied to an agro-alimentary production facility. The training base is generated, not by modeling in the state space, but by the use of the failure modes analysis of their effects and their criticality (AMDEC).

The goal of this paper consists in developing a diagnosis system of the failures in the level of production facilities by using the techniques of training by gradient back-propagation and probabilistic networks belonging to the family of the networks with basic radial function (RBF). The originality lies in the fact that for these techniques the training base is generated by the use of the failure modes analysis of their effects and their criticality (AMDEC).